DOCUMENT RESUME

ED 247 842 HE 017 526

AUTHOR Banta, Trudy W.; Fisher, Homer S.
TITLE Performance Funding: Tennessee's Noble Experiment in Promoting Program Quality through Assessment of Outcomes.
PUB DATE 24 Apr 84
NOTE 15p.; Paper presented at the American Educational Research Association (68th, New Orleans, LA, April 23-27, 1984).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Ancillary School Services; College Planning; College Programs; *Educational Assessment; Educational Quality; Evaluation Criteria; Government School Relationship; Higher Education; Needs Assessment; *Outcomes of Education; *Performance Factors; Program Evaluation; *Resource Allocation; *Standards; *State Aid
IDENTIFIERS *Tennessee; University of Tennessee Knoxville

ABSTRACT

The Tennessee Higher Education Commission's (THEC) use of a performance criterion in funding higher education is discussed, along with the results of evaluating this initiative. Information on program quality and improvement efforts is a factor in determining the budgetary allocation for each state institution. With funding from the Kellogg Foundation, an evaluation was conducted of the use of outcome information at the University of Tennessee, Knoxville. The following student outcomes were studied: achievement in general education, achievement in the major field, and opinion measurement concerning the quality of academic programs and services. Task forces recommended that student outcome information be included in the evaluative data gathered for the university's comprehensive program review process. Changes in instruments, data collection/analysis, and interpretation of results were recommended before utilizing outcome information. The initiative has strengthened the academic program review process and stimulated increased use of outcome information in departmental decision-making as well as campuswide strategic planning and resource allocation. Specific impacts on curriculum and instruction, student services, and institutional planning and evaluation are identified. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED247842

PERFORMANCE FUNDING:
TENNESSEE'S NOBLE EXPERIMENT
IN
PROMOTING PROGRAM QUALITY THROUGH ASSESSMENT OF OUTCOMES

Trudy W. Banta

Homer S. Fisher

The University of Tennessee, Knoxville

NE 017 526

Paper presented at the annual meeting
of the
American Educational Research Association
New Orleans
April 24, 1984

Session 18.10

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Trudy Banta

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Performance Funding: Tennessee's Noble Experiment in Promoting Program Quality Through Assessment of Outcomes

Tennessee is the first state to employ a performance criterion in funding higher education. Information on program quality and improvement efforts derived from comprehensive program evaluations is a factor in determining each state institution's budgetary allocation. Kellogg funding has assisted University of Tennessee, Knoxville faculty and administrators to assess the impact of the performance funding initiative and suggest directions for further refinement of the performance standards. Despite legitimate criticisms, the initiative has strengthened the academic program review process and stimulated increased use of outcome information in departmental decision-making as well as campus-wide strategic planning and resource allocation.

PERFORMANCE FUNDING: TENNESSEE'S NOBLE EXPERIMENT IN PROMOTING PROGRAM QUALITY THROUGH ASSESSMENT OF OUTCOMES

Assessing Program Quality in Higher Education

Institutions of higher education have been relatively free to chart their own courses and manage their own affairs since the Dartmouth College decision in 1819 (Marcus et al., 1983). The ivied walls of academe were not penetrated to a significant degree by the legions of evaluators that marched into public schools and other social agencies in the Sixties and Seventies to assess the effectiveness of programs supported with public funds. But with the Eighties have come reduced confidence in the entire system of publicly assisted education in America, and a critical need to make well-informed decisions concerning the appropriate allocation of scarce resources among a variety of social services that purport to enhance the quality of life. These forces have counteracted any immunity from public scrutiny that colleges and universities may have enjoyed in the past, and today there is increasing recognition of the need for comprehensive program evaluation in institutions of higher education.

Evaluation in higher education has traditionally been formative rather than summative, concentrating on what George Kuh (1981) has called context variables -- proportion of faculty with the doctorate, quality of students as defined by scores on entrance exams, size of the library collection, and expenditure per student -- rather than on program outcomes such as student achievement in general education and the major field. But with falling enrollments and steady state financing has come the realization that institutions of higher education cannot be all things to all people; rather each must clearly articulate its own mission, determine those things it can do best, and focus resources on enhancing strengths in those areas. Comprehensive program evaluation -- comprehensive in that programs are monitored from the setting of objectives through the allocation and utilization of resources for implementation, to the measurement of outcomes related to the objectives -- can provide the evidence of quality that is essential in making strategic decisions concerning the identity of programs to emphasize, combine with others, or eliminate.

Enrollment-based formula funding for public higher education has never succeeded in providing concomitant increases in program quality as enrollments increased. However, the fact that the current interest in improving public education comes at a time when both enrollment and price increases have reached a plateau may mean that an unusual opportunity exists for addressing qualitative concerns. Throughout the country there is increasing interest in alternatives to enrollment-based funding that reward institutions for assessing and improving program quality.

In 1979 the Tennessee Higher Education Commission (THEC) undertook what some observers regard as a noble experiment. Under the leadership of Grady Bogue and Wayne Brown (1982) a performance funding policy was instituted that applies to all public colleges and universities: Up to 5 percent of an institution's annual state allocation for instruction is awarded on the basis of its ability to demonstrate accomplishments in five performance areas.

According to the current Instructional Evaluation Schedule (THEC, 1983), program quality is demonstrated by:

1) calculating the percentage of programs eligible for accreditation that are accredited.

2) calculating the percentage of programs, which, within a five year period, have undergone peer review and/or have administered to majors a comprehensive field exam. Maximum credit for this standard is awarded if student performance on the field exam improves over time or exceeds the performance of students in similar programs at comparable institutions.

3) measuring value added via the general education component of the curriculum using the ACT COMP exam, and demonstrating that the performance of seniors exceeds the mean of value added computed for seniors at a group of comparable institutions.

4) conducting surveys of enrolled students, alumni, community members, and/or employers and demonstrating that generalizations about the quality of academic programs or services derived from the surveys have formed the bases for specific improvements in campus programs/services.

5) implementing a campus-wide plan for instructional improvement based on information derived from procedures 1-4 above, as well as other sources.

The THEC has assigned the following weights to the five instructional evaluation variables: 1-25 percent, 2-30 percent, 3-25 percent, 4-10 percent, 5-10 percent. In an application of the performance funding mechanism, an institution receiving a $60 million allocation for instruction from the state in 1984 could receive an additional 5 percent, or $3 million, for preparing a report illustrating full accomplishment of the five performance standards.

Tennessee's noble experiment draws nods of approval from accountability advocates. But faculty, to whom the responsibility for program evaluation must be assigned, are uneasy about the new emphasis on measuring outcomes. Their experience tells them that measuring instruments are costly and time-consuming to develop, and often lack reliability and validity.

Defining quality in higher education has never been easy. Ideally each institution should consider its own mission and develop its own standards for evaluating program quality. Since the performance funding program is meant to be applied to every one of the diverse institutions in Tennessee's system of higher education, from technical institutes and community colleges to the state's research institution -- The University of Tennessee, Knoxville -- the standards established were, inevitably, the product of numerous compromises worked out in a political environment.

In 1981 administrators at the University of Tennessee, Knoxville (UTK) had become sufficiently concerned about the potential impact of performance

funding on the institution to undertake a formal investigation of the THEC program. This effort was furthered by the selection of UTK as one of seven institutions in the country to receive a small grant from the W. K. Kellogg Foundation, through the National Center for Higher Education Management Systems (NCHEMS), for "increasing the use of student outcome information in program planning and decision-making."

The NCHEMS-Kellogg Project at UTK

The student outcomes UTK chose to study under the auspices of the Kellogg grant were those specified in the THEC Instructional Evaluation Schedule: Achievement in general education, achievement in the major field, and opinion concerning the quality of academic programs and services. A separate task force composed of associate deans and faculty members with appropriate expertise was appointed to study each of the specified outcome areas. The three groups met at 2- to 3-week intervals over the period January 30 - May 31, 1982. Each reviewed measurement methodologies available in the areas of concern and made recommendations for applying one or more of these at UTK.

The task force studying general education concluded that while it does not cover all skills and understandings general education at UTK is designed to convey, the ACT COMP (College Outcome Measures Project) exam could provide useful information for evaluating the effectiveness of the general education curriculum. Subsequently a testing program was initiated that involves administration of the COMP exam annually to representative samples of freshmen and seniors so that value added by the collegiate experience in general education can be estimated.

The task force appointed to look into the area of opinion measurement found that a popular commercial opinionaire had been administered to appropriate samples of enrolled students for two years, but survey findings had not been applied to improve campus programs. The task force determined that perceived usefulness could be increased if faculty and students became involved in designing their own survey instrument. A faculty member in sociology and another in political science pooled their expertise in survey research to develop a questionnaire with contributions from faculty, students, and administrators. The instrument was administered for the first time in May 1983 and was completed by 70 percent of a sample of 2200 enrolled students.

The task force investigating the measurement of student achievement in the major field was not satisfied with the reliance of the THEC instructional evaluation program on the use of scores on comprehensive exams as the best indicators of achievement in the major. They pointed out that even in those instances in which professional associations had developed reliable and valid instruments for measuring the competence of program graduates, often the national system of reporting exam scores did not permit use of the scores in program evaluation. That is, reporting a single total score provides no information about strengths and weaknesses in specific areas of the discipline. Some national associations employ a policy that prohibits the release of subscores to institutions.

The task forces recommended that Kellogg funds be used to support pilot projects -- at least one in each college enrolling undergraduates -- that would give individual units an opportunity to develop their own methodology for assessing program quality. Deans were invited to submit proposals, and

on January 1983 fourteen units in nine colleges received awards of $350 to $1500 to support pilot efforts to collect and use student outcome information. Seven units proposed to select or design and administer a comprehensive exam in the major field; seven units elected to survey enrolled students, alumni, or employers to gather evaluative data.

Members of all three task forces agreed that appropriately designed and systematically utilized instruments could provide information about student outcomes that would be quite valuable in assessing program quality. Having established as a result of their intensive investigations a sense of ownership of the instructional evaluation program, task force members wanted to institutionalize the most desirable aspects of that program. Consequently, they recommended that student outcome information be included in the evaluative data gathered for the University's comprehensive program review process. New language was prepared for the self-study guidelines that calls for the inclusion of outcome information such as comprehensive test scores; student opinion concerning courses, curriculum, methods of teaching, and services such as advising; and data on placement of graduates. This step ensures that every program in the University will give some attention to outcomes at least once every five to seven years when the program goes through its intensive review by internal and external consultants.

Finally, the NCHEMS-Kellogg project task forces recommended that the program reviews with their new emphasis on outcomes be used by the recently formed Planning and Budgeting Coordinating Committee to make strategic decisions concerning programs to be strengthened through infusion of institutional resources, programs to be maintained or combined with others, and those to be reduced in scope or size.

Results of Implementing NCHEMS-Kellogg Project Recommendations

The stated purpose of the NCHEMS-Kellogg initiative was to increase the use of student outcome information in planning and decision-making. NCHEMS and Kellogg assumed -- and specified in the request for proposals that this would be the case -- that each of the seven institutions selected for the national project had at its disposal quantities of student outcome information that with a little reworking and promotion could be utilized more extensively. The UTK proposal described examples of such information on campus. However, once the project was underway, interviews with deans, department heads, and faculty provided evidence that few were satisfied with the quality of the outcome information at their disposal. Previous administrations of the COMP exam had been to seniors only, and to samples of seniors that were not considered representative of colleges or of the senior class. Scores from most nationally standardized exams in major fields were ignored because little information is conveyed by total scores alone, or because the exams were not considered content valid for assessment of the relevant UTK programs. Data from commercial survey instruments administered to students were ignored because items in the surveys were not considered appropriate for use in evaluating UTK programs.

Changes in instruments, in data-gathering methodology, in ways of analyzing responses and interpreting results were needed before outcome information could acquire the credibility essential for utilization. Implementation of task force recommendations concerning administration of the COMP exam and design of local measures of opinion and achievement in order to increase face

and content validity produced significant examples of utilization of outcome information at the University of Tennessee, Knoxville.

Impact on Curriculum and Instruction

The score reports prepared by ACT following the testing of freshmen and seniors in 1983 with the COMP exam have generated substantial interest among the academic deans, and among the department heads and faculty who have seen the reports. The measure of value added -- score gain from the freshman to senior years -- provided encouragement for curriculum planners: Mean score gain at UTK is well above the mean of score gains at peer institutions. However, percentile rankings on the two subscales Functioning in Social Institutions and Solving Problems are not as high as the faculty would like to see them. While there is no sound basis, nor is there an immediate need, for making precipitous changes in general education distribution requirements on the basis of the COMP exam scores, there is considerable interest in (1) analyzing relationships between COMP scores and such factors as courses taken, time on task, and participation in internships, interdisciplinary courses, and other special experiences; and (2) reviewing future reports from ACT to see if the pattern of subscore strengths and weaknesses obtained in 1983 is maintained in subsequent years. A group of faculty with interest in analyzing large data sets has been organized to carry out the analytical studies.

Preliminary data analyses indicate that participation in student professional organizations is associated both with high scores and high score gain on the COMP exam. This finding suggests, obviously, that increased emphasis on student participation in professional organizations might enhance the educational experience of students on campus. The UTK Coordinating Committee on General Education, as well as the Board of Deans and others interested in program improvement will continue to consider the COMP results and the unfolding picture of correlates of achievement as they contemplate broad changes in curricula and course work necessitated by increasing selectivity in admissions standards and a planned conversion from an academic calendar based on quarters to a semester system.

Study of the COMP exam itself has proven to be a faculty development activity that holds much promise. Dr. Aubrey Forrest of ACT has been on campus twice under the auspices of the NCHEMS/Kellogg Project, and his presentations have been widely acclaimed by participants. The design of the COMP exam is quite interesting: Each item has been constructed to assess skills in a process area (communicating, solving problems, clarifying values) as well as a content area (social science, science/technology, the arts). Moreover, the test items require the student to apply higher order intellectual skills such as analysis, synthesis, and evaluation, not just recognition and recall. Thus careful study of the exam and the rationale on which it is based suggests to faculty ways of teaching and testing students that foster development of the more complex skills. More faculty development of this kind is contemplated.

While changes in general education will be made slowly due to the institution-wide implications of many such endeavors, changes in curricula, instruction, and supporting services associated with individual programs can be made more quickly and easily. Administration of the "Student Satisfaction Survey" by Professors Kent Van Liere and William Lyons in Spring 1983

revealed some student assessments of the quality of programs and services that proved disquieting to administrators and faculty in several units. Students in the College of Communications provided ratings of "availability of advisor" and "availability of required courses in the major" that were below University means for those items. The Communications dean was sufficiently concerned about these findings to take immediate steps to improve advising and make adjustments to give more students access to required courses. A full-time advisor for freshmen and sophomores was added to the dean's staff, and the number of advisees assigned to each faculty member was reduced.

Student Satisfaction Survey results in the colleges of Business and Engineering, and the Department of Political Science prompted faculty in those units to initiate their own follow-up student surveys. The very detailed Engineering survey was administered by mail in February 1984, so results have not yet been compiled. In the business school a faculty member with experience in using a TELLUS machine that permits responses to ten items to be entered electronically and provides immediate tabulation of results, administered questions to over 400 students during preregistration. That endeavor furnished evidence of some dissatisfaction with student advising, and the appropriate associate dean undertook a thorough review of advising procedures and practices in the College. Advisors and all faculty have been sensitized to the needs for increased interaction with advisors and faculty that were indicated by students' responses to both the initial survey and the college follow-up.

The department head and faculty in the Department of Political Science were concerned because the Spring 1983 administration of the "Student Satisfaction Survey" indicated that students were somewhat dissatisfied with the quality of instruction provided by graduate teaching assistants. The departmental committee on undergraduate instruction designed a follow-up study that involved administering to all undergraduate students taking political science classes in Fall 1983 the portion of the "Student Satisfaction Survey" dealing with the classroom experience. Following analysis of 1100 student responses the department head had, for the first time, comparative data on the perceived teaching effectiveness of every faculty member and every graduate teaching assistant (GTA). He shared the comparative data individually with each faculty member, and he believes this process will encourage faculty to take specific steps to improve their teaching. Indeed GTAs as a group did receive lower effectiveness ratings than faculty. Ways of responding to this finding are being explored -- larger lecture sections taught by outstanding faculty with discussion sections staffed by GTAs. Specific changes in content and methods of instruction are being planned for the introductory course in political science.

The pilot project -- a survey -- carried out in the Department of Textiles, Merchandising, and Design pointed to a need, once again, for improvement in student advising. In response a new curriculum planning sheet for majors was designed.

In several units the results derived from pilot projects confirmed present practice, e.g., high scores on the Graduate Record Advanced Tests by seniors in the departments of psychology, history, botany, and microbiology encouraged those faculties to continue current patterns of course work and classroom instruction. But in the departments of Geography and Food Technology and Science, the faculty decision to design their own comprehensive

exam for seniors had profound effects. In order to determine the content of their exams the faculties had to consider in a more intensive way than heretofore such curriculum matters as the relative emphases given to specialty areas of the discipline, the way course sequences fit together and build on each other, and the competencies students should possess upon completion of the curriculum for program majors.

The exam developed over the better part of a year by the faculty of the Department of Geography has four sections: Physical Geography, Economic Geography, Cultural Geography, and Technique. Seniors who took the exam when it was administered for the first time in February 1984 attained high scores on the Cultural Geography section; their lowest scores were in economic geography. These specific findings and the global picture of scores have caused the faculty to undertake several curriculum changes: A course in economic geography will be added, cultural geography will be refocused (its emphasis in the curriculum will be slightly reduced), and students will be encouraged, perhaps required, to take a stronger common core of courses.

As in Geography, all faculty in the Department of Food Technology and Science (a unit in the College of Agriculture) were involved in developing their comprehensive exam for seniors. While Geography faculty chose not to involve in the design phase UTK faculty with expertise in measurement, the Food Tech faculty did schedule several sessions with a Kellogg Project consultant identified for this purpose, Professor Schuyler Huck from the Department of Educational Psychology and Counseling. Dr. Huck provided general guidance in developing multiple choice test items, and assisted in determining instrument reliability. In addition to the opportunity for internal review of instruments by a specialist in measurement, both the departments were encouraged to retain two external consultants to review their tests. The two faculties identified respected scholars in the discipline and asked those individuals to review drafts of their exams and even to give the tests to their own students for purposes of obtaining comparative data.

Analysis of students' test scores also brought about some immediate changes in the Food Tech Department. Faculty were not satisfied with the scores achieved on the Microbiology and Food Chemistry sections of the test. Students were not able to <u>apply</u> their knowledge to solve problems to the extent faculty had hoped they would be able to do. Following a series of meetings, the faculty teaching microbiology and food chemistry courses agreed to place much more emphasis on applications in their teaching and in their classroom tests.

The Food Tech faculty already have begun to consider ways to improve their exam for seniors. They want to add a performance measure that would take students into the laboratory to solve certain problems. Students' lab techniques would be judged as well as their approach to a problem and their resolution of it.

The use of nationally standardized exams to test student achievement for purposes of program evaluation can be valuable. At UTK the dean of the College of Business asked seniors to take the Business Assessment Test offered by Educational Testing Service as part of its Undergraduate Assessment Program. Students' scores gave evidence of particular strength in economics and weakness in business law. The college faculty had other indications of these

anomalies in the curriculum and acted to reduce the three-course requirement in economics to two courses so that a requirement in business law could be added. Notwithstanding this kind of example, the experience on this campus to date indicates that faculty have a greater intellectual stake in the outcomes of testing, and are more likely to undertake improvement initiatives based on those outcomes, if they have invested the time to become involved in designing their own comprehensive exam.

On technical grounds one can argue against the use of locally developed tests; there are no norms against which to judge local performance, reliabilities may be questionable, content and predictive validity are difficult to demonstrate. But when a test is being used to assess and improve program quality, students' scores are aggregated and faculty consider the implications of scores for changing the program rather than for making judgments about the relative competence of individual students. Thus the importance of technical flaws in the instrument is minimized, and the potentiality for effecting meaningful program improvement is great.

Impact on Student Services

Responses to the Student Satisfaction Survey items on registration and availability of courses indicated some dissatisfaction with the registration process. The Vice Chancellor for Student Affairs, Howard Aldmon, used this finding to support a decision to establish an earlier cut-off date for admission to the University so that student demand for classes could be assessed in a more timely fashion and extra sections scheduled to accommodate demand. In a further attempt to improve the quality of student advising, Vice Chancellor Aldmon asked that each dean provide a representative to meet with students encountering special problems during the drop/add process.

Student retention is a matter of increasing concern to campus administrators across the country. Analysis of Student Satisfaction Survey responses for students returning to the University and those not returning two quarters later has provided preliminary evidence that satisfaction with the University is an important factor in students' decisions to pursue their studies at UTK. Higher grade point averages and fewer hours of employment (less than 30 hours per week) also are linked with persistence on this campus. Developers of the Student Satisfaction Survey found that patterns of student satisfaction varied by college. As a consequence, they have provided a profile for each of the nine colleges enrolling undergraduates of factors characterizing student academic and social satisfaction in that unit. For some colleges social satisfaction -- interaction with peers (perhaps in student professional organizations) or membership in a social fraternity -- contributes most to overall satisfaction with the University. For the professional schools -- nursing, business, architecture, engineering -- interaction with faculty is a potent factor in determining satisfaction. These profiles are being used by college faculties to make adjustments they hope will help to increase student retention.

Impact on Institutional Planning and Evaluation

The University of Tennessee, Knoxville has a carefully crafted ten-year-old program review process that is conscientiously implemented by the Provost and his staff. Central administrators, including the Chancellor himself, review the self-study, and reports prepared by internal and external reviewers following a 2½-day intensive site visit. Objectives and aspirations of the department or program under review and the recommendations of the reviewers are considered in University-wide as well as unit planning and in internal resource allocation.

Prior to 1983 the UTK program review guidelines, like those at many other institutions, focused primarily on program input factors as evaluative criteria. Qualifications of faculty, quality of students as measured by aptitude tests or grade-point averages, and adequacy of facilities and the library collection, were included by program faculty in the self-study, and examined by reviewers. In July 1983 the director of the UTK Kellogg Project was given the opportunity to submit new material for the program review guidelines that would provide a focus on student outcomes such as placement of graduates, opinion concerning quality of the program and supporting services, and achievement in general education and the major field. The revised guidelines were put into effect in September 1983.

To emphasize the importance of using student outcome information in program evaluation, in January 1984 Provost George Wheeler asked every academic unit to develop a plan for assessing student achievement in the major field at least once in the next five years.

The UTK Planning and Budgeting Coordinating Committee, appointed by Chancellor Jack Reese in September 1982, has reviewed the Van Liere-Lyons retention study in preparation for planning strategies to increase student persistence at UTK. Information on freshman and senior COMP exam scores accompanied by preliminary analyses of correlates of achievement in general education -- including reasons given by freshmen for choosing to attend UTK -- has been considered by the committee as it seeks to clarify the mission statement of the University and communicate it to the clientele the institution hopes to serve. During Spring Quarter 1984 the committee will work with Professors Van Liere and Lyons and the Learning Research Center staff to develop and administer a survey of alumni to obtain their opinions concerning program quality. The committee has begun to use the academic program review documents, with their new emphasis on student outcome information, in determining which programs to strengthen through allocation of additional resources, and which to combine with others or terminate.

In the most tangible and immediately effective illustrations of outcomes utilization to date, a reference to the use of student outcome information as evidence of program quality was included in the 1984 instructions for use by program heads in preparing their annual budget requests. In addition, the Planning and Budgeting Coordinating Committee used student outcomes as one of the criteria in selecting the campus proposals to be entered in Tennessee Governor Lamar Alexander's 1984 state-wide Centers of Excellence competition. Previously the criteria for assessing quality in procedures such as these had included only input and process variables.

An Assessment of Performance Funding

The task of convincing administrators and faculty of the value of systematically collecting evidence of program quality and putting it to use requires strong leadership, and time.

Powerful objections to the collection and use of outcome information can be raised: The process costs too much, faculty have difficulty agreeing on program objectives, appropriate instruments are not available, and instruments that are available lack acceptable reliability. Representative study and planning groups must be established to consider these objections, to review measurement methodologies, and to assess the potential benefits of employing these strategies. The methodologies must be adapted to fit institutional and program missions. Individuals participating in the study groups must communicate their findings to the students, faculty, and administrators they represent. Ultimately many will recognize that if faculty believe an instrument can give them information about strengths and weaknesses of their program, some of the technical imperfections in the instrument may be overlooked since data will be aggregated for assessment of the program rather than the relative competencies of individual students. Conducting pilot tests of alternative methodologies will provide an experience base upon which widespread application can be built.

At UTK the NCHEMS-Kellogg grant provided access to the leadership, the time, and some financial assistance for (1) carrying out the studies essential to establishing the institution's ownership of its student outcomes assessment program, (2) establishing the communication networks necessary to inform faculty and students of the benefits of such a program, and (3) pilot testing alternative methodologies for collecting and using outcome information. The use of student outcome information in program assessment and improvement has been woven into the fabric of institutional planning and decision-making at UTK. As a result of the adoption of appropriate new policies and procedures, program heads in all colleges are using outcome data to inform the process of improving their programs, while central administrators are considering these data as they make strategic decisions about program mix and allocation of internal resources.

The analysis of the THEC Instructional Evaluation Schedule which took place at UTK with the assistance of the Kellogg grant provided an assessment of the impact of performance funding that was generally positive. An institution can benefit in many ways from institution-wide application of comprehensive program evaluations that include systematic measurement of student outcomes.

The study of performance funding provided an endorsement of the evaluative criteria employed in the THEC Schedule. However, serious questions were raised about some of the standards of accomplishment associated with the criteria, and about the relative weights assigned to each.

Accreditation is a process which certifies that a program has met certain minimum standards, but beyond that minimum it does not assist in differentiating programs on the basis of quality. In complex institutions where it makes sense for related programs to share competent faculty members rather than duplicate the expertise in two or more units, it may be prudent not to

pursue accreditation in every program field. For these and other reasons, accreditation should be given less weight in performance funding than the THEC has given it, and institutions should be given an option to apply for program exemptions by submitting detailed explanations, consistent with their mission, for not pursuing accreditation in certain fields.

Measures of achievement in general education and in the major field are appropriate evaluative criteria. However, far too much emphasis is given in the current draft of the THEC Instructional Evaluation Schedule to the use of scores on comprehensive tests as the principal indicator of achievement. Comprehensive program evaluations, incorporating external peer review, should be at the heart of a performance funding program, and each unit should have the freedom to select the method(s) to be used in demonstrating that students have satisfactorily achieved the learning outcomes established for them by faculty in the major field. These methods include testing, obtaining performance ratings for students and/or program graduates, having external consultants evaluate theses and dissertations, keeping records of placements of graduates in related jobs or in accredited graduate programs, and reporting outstanding professional accomplishments of graduates.

Currently the THEC Schedule attaches too little importance to the use of opinion surveys and to the overall plan for instructional improvement. Carefully designed surveys, particularly when carried out in conjunction with achievement testing, can provide important clues to the reasons behind high or low test scores. In some cases relatively inexpensive changes in student advising or field experiences suggested by survey results can substantially increase student satisfaction, which is a potent factor in retention -- a matter of increasing importance to all colleges and universities.

The nature of the plan for instructional improvement proposed as an evaluative criterion by the THEC needs to be defined more precisely. If comprehensive program evaluation can be viewed as a central element in performance funding, each institution's annual plan for instructional improvement should identify the academic programs reviewed the previous year and indicate how recommendations for improvement contained in the reports of internal and external reviewers have been addressed by the academic unit, its college administration if applicable, and the central administration. Actions designed to effect improvements could take many forms, including reallocation of internal resources to provide for additional faculty, or equipment needs; adjustments in curriculum patterns, course structure, or instructional methods; provision of faculty development experiences or improved internship experiences for students.

The foregoing discussion of the relative emphases now given to evaluative criteria by the THEC as opposed to those proposed by investigators at UTK may be summarized as follows:

THEC Standard	Current Weight	Proposed Weight
Accreditation	25%	10%
Assessment of Student Achievement in the Major Field (to be changed to "Comprehensive Program Review")	30%	25%
Assessment of Student Achievement in General Education	25%	20%
Opinion Surveys	10%	20%
Plan for Instructional Improvement (based on response to program reviews)	10%	25%
TOTAL	100%	100%

Institutional resistance to new funding initiatives based on qualitative assessments can be reduced if "performance funding" comes from additional state allocations for higher education rather than from rearrangements of the existing funding base. Assessment and improvement of program and institutional quality should be rewarded with new funds in a manner that is highly visible.

This argument can be pursued at the campus level: Deans, department heads, and faculty will undertake more willingly the effort needed to collect outcome information for use in meeting performance funding requirements if the institution recognizes and provides tangible rewards for demonstrating program quality and attempts to improve it. First the institution's academic leadership can provide personal acknowledgement and public recognition of efforts to assess and improve program outcomes. Incentive funds can be used to encourage units to undertake instructional improvement activities. Most importantly, outcome information can become a highly valued consideration in planning decisions that result in improved resource allocations.

Ultimately the highest reward for undertaking the assessment of outcomes will be intrinsic: Faculties will obtain evidence that improvements in curricula and instruction have fulfilled their goal of providing the best possible education for students.

References

Bogue, E. Grady and Wayne Brown. "Performance Incentives for State Colleges." Harvard Business Review, Nov.-Dec. 1982, 123-128.

Kuh, George D. Indices of Quality in the Undergraduate Experience. AAHE-ERIC/Higher Education Research Report No. 4, 1981. Washington, D.C.: American Association for Higher Education, 1981.

Marcus, Laurence R., Anita O. Leone, and Edward D. Goldberg. The Path to Excellence: Quality Assurance in Higher Education. ASHE-ERIC/Higher Education Research Report No. 1, 1983. Washington, D.C.: Association for the Study of Higher Education, 1983.

Tennessee Higher Education Commission. Instructional Evaluation Variables, November 21, 1983. Nashville: THEC, 1983.